Qualitative analysis of a new web based system for monitoring and evaluation of HIV/AIDS, El Salvador 2009

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Background: In February 2009, the Ministry of Health (MoH) of El Salvador launched SUMEVE, a unitary web-based system for monitoring and evaluation of HIV/AIDS. SUMEVE collects data on every person seeking testing or treatment for HIV/AIDS. In May 2009 we performed an early, qualitative analysis to verify whether the system was operating as designed.

Methods: We selected a convenience sample of 5/30 collection centres and 6/30 laboratories at regional and central level and performed a qualitative analysis assessing the system's resources and functioning, following CDC (Atlanta)'s ''Updated Guidelines for Evaluating Public Health Surveillance Systems''. Standardized interviews with SUMEVE-professionals were conducted to explore the system's strengths, weaknesses, opportunities and threats (SWOT-format).

Results: Patient data are entered on paper forms when HIV rapid testing is requested at primary health-care facilities and forwarded with the HIV test results to the collection-centres for entry into the online database.

97% of primary health care facilities and 100% of HIV laboratories are reporting to SUMEVE, producing exhaustive data and showing wide system acceptability. Timeliness varies 1-7 days between generating and digitizing notification forms for instant analysis.

SWOT analysis shows as strengths a comprehensive legal framework for SUMEVE which is part of the National HIV/AIDS plan. Registration by name avoids double notification.

Results are regularly published on MoH website.

Data confidentiality is guaranteed by password-restricted access.

The system has a flexible modular design allowing to amend and remove indicators.

Identified weaknesses were: lacking reliable internet connection at two of the centres and that notification forms there could not be stored confidentially.

As opportunities, we identified advocating renewed political commitment of the current government to guarantee the stability of SUMEVE and take actions in benefit of vulnerable groups identified by SUMEVE.

No current threats to the system performance could be identified.

Conclusion: SUMEVE is operating as planned on all levels, collecting exhaustive data of at least 97% of primary health care facilities. Identified weaknesses are being improved. SUMEVE is the only surveillance system to direct public health interventions for HIV/AIDS. We recommend performing a re-evaluation after one year to assess the value of the SUMEVE for planning and executing intervention measures.

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HIV infection in elderly (patients over 65 years)

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Background: After 1996 with highly active antiretroviral therapy, not only HIV infected people live longer but also new HIV infection occurs in older people.

Methods: This is a Retrospective observational study in Registered HIV infected patients older than 65 years old in order to review special epidemiologic, clinical and biologic aspects of HIV infection in elderly.

Results: Among 1680 registered HIV infected patients in this center, there are 61 HIV infected patients older than 65 years old including 13 women (21%) and 48 men (79%). The oldest patient is an 84 years old man and male-female ratio is 4/1. There are 29 homosexualbisexual transmission (47%), 24 heterosexual transmission (40%), only one patient blood transmission and 7 patients who denied any risk factors (11%). 23 patients (38%) are coming with AIDS defining condition (stage C), 13 patients (21%) are symptomatic (stage B) and 25 patients (41%) are asymptomatic (stage A). Before antiretroviral treatment, CD4 count was between 9 and 493 as a mean 231cell/ml. There were 24 patients (40%) with CD4 count less than 200 and 7 patients (11%) with CD4 count less than 100 cells/ml. Recent CD4 count, was between10 and 1080 and as a mean 478. There is an important increase in CD4 count (247 cells/ml) after antiretroviral treatment. Viral load before treatment was ranged between 6410 to 1740000 copies/ml. Mean viral load was 230184. There are only 5 untreated patients (8%). After antiretroviral treatment 8 patients present viral load more than 500 copies/ml including 2 untreated patients. It means 6 patients (10%) suffered from confirmed virologic failure and 7 patients (11%) present detectable viral load but less than 500 copies.

Conclusion: 80% of HIV infected people older than 65 are men. Homosexual contact is the major risk factor in this group. In spite of 40% asymptomatic patients there are near 40% stage C. 40% of patients were coming with low CD4 count (less than 200). Mean CD4 count before treatment was 231 which is less than younger HIV infected patients, may be because of low CD4 count in older patients and/or late diagnosis of HIV infection in elderly. Virologic response is as well as younger patients even better.

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Primary human immunodeficiency virus-1 infection: Clinical, virological and immunological characteristics of a braziliam cohort

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Background: Primary HIV-1 infection (PHI) consists in the period of time between viral acquisition and seroconversion, its hallmark is high viremia and consequently increased

infectiousness. The occurrence, severity and duration of symptoms are predictive factors of clinical deterioration. We report here the epidemiological, clinical, virological and immunological characteristics of a cohort of patients with PHI.

Methods: Prospective observational study of patients with PHI at the Emilio Ribas Institute of Infectious Diseases, a tertiary hospital in Sao Paulo, Brazil. Inclusion criteria included negative or undetermined HIV-1 serology associated with viral detection, or clinical and serological evidence of seroconversion during the last 6 months. Epidemiological history, clinical data, HIV-1 plasma viral load, CD4 cell count, genotypic resistance testing, serology for hepatitis B, C, A, toxoplasmosis, cytomegalovirus, herpes and syphilis were recorded as well as the use of highly active antiretroviral treatment (HAART).

Results: Between 2007 and 2009, 10 patients met the inclusion criteria (8 males and 2 females, median age was 34). Two patients were asymptomatic and eight were symptomatic. The main symptoms were fever (80%), myalgia (60%), rash (30%), hepatitis (20%) aseptic meningitis (20%) and renal failure (10%). Only 4 patients had a mononucleosis-like illness. Homosexual transmission route was more frequent (60%). Five patients had plasma viral load above the upper limit of detection and the median CD4 cell count was 395cel/mm+ (range: 47—835cel/mm+). Five patients received HAART and among 5 patients who did not receive HAART, 2 patients had clinical and immunological criteria for initiating HAART after 12 months of follow-up. Genotypic resistance testing was available for 4 patients. Overall patients had triple class susceptible HIV-1 sub-type B strain. One patient had primary resistance to non-nucleoside reverse transcriptase inhibitors and several protease inhibitors mutations and this finding was correlated with clinical severity.

Conclusion: Clinical, virological and immunological parameters in PHI may be heterogenous, atypical clinical presentation is frequent. Determinating resistance profile is useful for early therapeutic intervention, which is associated with better outcome.

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Prevalence of metabolic syndrome and estimated Framingham risk score among Brazilian HIV-infected patients

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Background: Recent studies suggest that HIV infection itself or combination ART (cART) were both associated with increased risk for cardiovascular disease (CVD). The 10-year Framingham risk score (FRS) is used to predict cardiovascular events in the non-HIV-infected patients, and its application in the HIV-infected subjects is under discussion. We evaluated the traditional CVD risk factors and metabolic syndrome (MS) components among HIVinfected patients ART-treated and ART-naïve.

Methods: This was a cross-sectional study of HIV-infected subjects ART-treated (n = 29), HIVinfected patients ART-naive (n = 28) and controls without previous CVD events (n = 32). Subjects were selected for common age range (20 to 69 years) from the Instituto de Infectologia Emilio Ribas, São Paulo. We assessed cardiovascular risk factors, HIV viral load, nadir CD4 count, high-sensivity C-reactive protein (hs-CRP) and plasma lipid concentrations. MS components included low LDL cholesterol, high triglycerides, high BMI, hypertension and diabetes. The statistical analysis were done using a SPSS 16.0.

Results: Groups were matched for age (mean 43.6 years for ART-treated vs 42.0 years for ART-naïve vs 42.8 for controls); 31%, 35.7% o and 46.8% are women, respectively. The mean duration of HIV infection was 10 years for ART-treated and 6 years for ART-naïve subjects. The mean nadir CD4 count (cells/μL) was 208 for ART-treated and 449 for ARTnaïve subjects ($p < 0.0001$); current HIV-RNA levels were undetectable on ART-treated and 13.683 copies/ml on ART-naïve subjects ($p = 0.005$). There were no significant differences between the groups in levels of hs-CRP, HDL and LDL-cholesterol. Total cholesterol was higher in ART-treated than in ART-naïve (mean 209 vs 182 mg/dl, respectively; $p = 0.02$); triglycerides was higher in ART-treated than in ART-naïve subjects (mean 234 vs 137 mg/dl, respectively; $p = 0.02$). Hypertension was more frequent in ART-treated compared to the others groups ($p = 0.01$). 41.4% of ART-treated patients had MS, compared to 25% of ARTnaïve and 28.1% of controls ($p = 0.0001$); 27.6% of ART-treated had a high (> 20%) 10-year FRS compared to 0% in the others groups ($p < 0.0001$).

Conclusion: Our results shows a high prevalence of MS and high FRS in HIV-patients under treatment, which can be used to predict cardiovascular risk stratification in this population.

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Factors affecting acceptance of HIV testing among antenatal care attendees in Ethiopia: With emphasis on role of male partners

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Background: Counselling and testing is an entry point for PMTCT of HIV infection. To increase uptake of PMTCT interventions and to benefit more generally from HIV testing, the greater involvement of men is important. This study was designed to assess factors affecting acceptance of HIV testing among antenatal care (ANC) attendees with emphasis on role of male partners, in Wolaita zone, southern Ethiopia.

Methods: Cross-sectional study was conducted on 412 pregnant women using structured questionnaire from March to April 2008 in three public health centers of Wolaita zone, southern Ethiopia. The study was complimented and triangulated by focus group discussions (FGDs). In the absence of similar study, the sample size was determined based on the assumption that 50% of women would make joint (with their